

# ALLISON 650 RANDOM NOISE SOURCE

## A TRANSISTORIZED NOISE SOURCE



The Allison 650 Random Noise Source consists of a silicon diode as the noise source driving a transistorized amplifier. Also included are four shaping networks, a four-step — 20 db per step — attenuator, and a voltmeter. The 650 has uniform spectrum level from subaudio to above 30 kc, with a good Gaussian distribution of amplitudes.

The instrument is nonmicrophonic and can be used in areas of high ambient noise and vibration. Battery and AC powered models are available.

Uses of this small, lightweight portable instrument include a noise source for shaker tables or high level environmental acoustic testing; and microphone and other transducer calibration signals. It may also be used as a source of masking noise for hearing tests.

### PRICES F.O.B. FACTORY

	Battery	AC
Allison Model 650 .....	\$265.00	\$280.00
650R Rack Mount .....	275.00	290.00

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SPECIFICATIONS	
Coverage:	
Flat position	Constant energy-per-cycle bandwidth from below 5 cps to over 30 keps.
Position 1	Constant energy-per-octave bandwidth
Position 2	12 db per octave rolloff above 1,000 cycles.
Position 3	6 db per octave rolloff below 100 cycles, and 6 db rolloff above 320 cycles (a noise source for calibrating sound level meter microphones).
Output Voltage	Maximum of 1.5 volts rms with an attenuator of 3 steps, 20 db per step and voltage control.
Load Impedance	600 ohms
Power Supply	1 Burgess XX15 Battery: Alternate Power Supply an AC package that replaces the battery.
Size	6¾" x 6¾" x 6" for the Portable Model.
Weight	4½#

### Rack Mount Model Available

3½" x 19" panel x 5" deep



See reverse side for typical performance curve



Proved dependable in years of service  
**Allison Laboratories, Inc.**

11301 OCEAN AVENUE • LA HABRA, CALIFORNIA



# ALLISON 655 RANDOM NOISE SOURCE

## A MINIATURE TRANSISTORIZED NOISE SOURCE



The Allison 655 Random Noise Source is a miniaturized unit with a uniform output over the frequency range of 5 cps to 30 kcps. The noise is generated by a silicon diode feeding into a transistor amplifier. All internal connections are welded and the unit is encapsulated for maximum protection against both forces of gravity and moisture. The unit has good voltage stability and is temperature stabilized from 0° to 50°C.

The 655 is completely nonmicrophonic, and thus may be used in places where the high ambient noise level would prevent the use of vacuum tube type noise sources. The small size of the generator makes it possible to install the device in the instrument usually without redesign. In the event 22½ VDC is not readily available, a battery may be included which, with intermittent use, will last the shelf life of the battery. Many other applications may be made including drive signal for shake tables and acoustical test chambers.

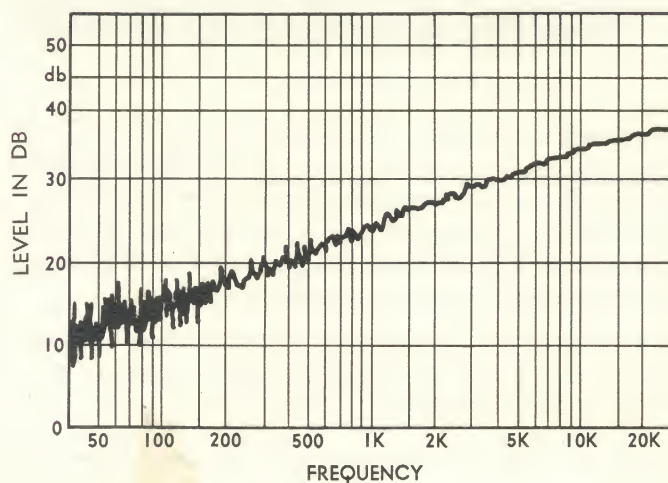
A curve showing the third octave band analysis of the output verifies the 3 db per octave rise in output to be expected in a good noise source. The emitter follower output circuits results in a very low output impedance of 36 ohms. As a result of this low impedance, it may be connected into a long line without affecting the frequency characteristics of the signal from the unit. It will supply .3 volt into a 10,000 ohms load. Units with output over a wider frequency range up to better than 100,000 cycles can be supplied on special order. The amplifier is capable of supplying 5 volts rms sine wave signal. This results in a complete absence of clipping of peaks at the maximum output of .3 volt noise signal.

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## SPECIFICATIONS

- Noise Source Silicon diode
- Power requirement 22.5 V DC 1.4 MA.
- Frequency range 5 cps to 30 kcps
- Output impedance 36 ohms
- Output .3 volts into 10,000 ohms
- Size 1¼ x 1¾ x 1⅝
- Terminals 3 turret terminals
- Weight 2½ oz.

Analysis of Equal Energy per Cycle (Flat)  
Output by ½ Octave Analyzer From  
40 CPS to 30 KCPS



## PRICES F.O.B. FACTORY

Allison Model 655 (Less than five)	\$60.00 each
Six to nine units per order	55.00 each
10 to 24 units per order	50.00 each
25 to 49 units per order	45.00 each
50 to 99 units per order	38.00 each
100 units per order and up	36.00 each



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